



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/870,030 | 05/30/2001 | Hiroyuki Baba | 33626 | 6747 |

116 7590 04/02/2003

PEARNE & GORDON LLP
526 SUPERIOR AVENUE EAST
SUITE 1200
CLEVELAND, OH 44114-1484

| |
|----------|
| EXAMINER |
|----------|

CHAPMAN JR, JOHN E

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2856

DATE MAILED: 04/02/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/870,030

Applicant(s)

BABA ET AL.

Examiner

John E Chapman

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 28-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The disclosure is objected to because of the following informalities: The specification states that the distances L1 and L2 should be below about 0.1 times the diameter D (page 34, lines 18-19), but the examples given on page 34, lines 28-30, appear to be contrary to the statement. Clarification is required.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over either JP 62-10356 or the admitted prior art.

Regarding claims 1, 9 and 12-17, the only difference between the claimed invention and the prior art consists in the height of the sensor casing 1 of Fig. 1 of JP 62-10356 (or sensor casing 801 of Fig. 25 of admitted prior art) relative to its width. A mere change in size or shape is generally recognized as being within the level of ordinary skill in the art. See *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claims 2 and 10-11, the spacing between the plate and the top and bottom walls of the casing comprises a mere change in size or shape.

Regarding claim 3, it would have been obvious to place the piezoelectric transducer on either surface of the oscillating plate, since it would have been obvious to one of ordinary skill in

the art that either would function in substantially the same manner to produce substantially the same result.

Regarding claim 4, note Fig. 3 of JP 62-10356 (or Fig. 27 of admitted prior art).

Regarding claim 5, note the above remarks regarding claims 3 and 4.

Regarding claims 6-8, it would have been obvious to place the piezoelectric elements on both surfaces of the oscillating plate in order to duplicate the signal and thereby increase the signal-to-noise ration.

Regarding claim 10-11, the spacing between the plate and the top and bottom walls of the casing comprises a mere change in size or shape.

note the above remarks regarding claims 3 and 4.

Regarding claims 18-27, note Fig. 3 of JP 62-10356 (or Fig. 27 of admitted prior art).

4. Applicant's arguments filed February 27, 2003 have been fully considered but they are not persuasive. Applicant argues that the claimed invention is patentably distinct from the prior art because each of the numerical limitations in the claims are of a critical nature, and the claimed relative dimensions perform differently than in the prior art devices. Applicant's arguments are not persuasive because there is no showing that the numerical limitations in the claims are critical, i.e., that the claimed device achieves unexpected results relative to the prior art, nor is there a showing that the claimed relative dimensions perform differently than in the prior art devices. The arguments of counsel cannot take the place of evidence in the record. See *In re Schulze*, 145 USPQ 716, 718 (CCPA 1965). While counsel argues that the claimed device reduces vibrations

to a minimum level, there is no evidence that a mere change in the height/width ratio of the sensor casing 1 of Fig. 1 of JP 62-10356 (or sensor casing 801 of Fig. 25 of admitted prior art) reduces vibrations in the sensor 5 (804) to a minimum level. It is not evident that a mere change in the height and/or width of the sensor casing affects vibrations in the sensor element of the prior art.


It is noted that the criticality of the height/width ratio of the sensor appears to be related to the resonant frequency of the acceleration sensor (page 33, line 13), and the desire to prevent standing waves along the direction of the diameter D (page 34, lines 30-33) and to solve the problem of acoustic resonance (page 36, lines 3-9). It is not clear, however, that sufficient structure is recited in the claims to support the desired result of preventing standing waves or solving the problem of acoustic resonance in the sensor.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Chapman whose telephone number is (703) 305-4920.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.


JOHN E. CHAPMAN
PRIMARY EXAMINER